

APPENDIX D

Environmental Mitigation Projects

Tesoro shall implement the Environmental Mitigation Projects in this Appendix consistent with the requirements in Section IX (Environmental Mitigation Projects) of the Consent Decree and this Appendix.

I. School Bus Replacement

Tesoro has selected the Mount Diablo Unified School District in Contra Costa County, California to implement the School Bus Replacement Mitigation Project. Tesoro will contribute funds to the Mount Diablo Unified School District sufficient to cover the difference in cost of purchasing a minimum of 4 new compressed natural gas (CNG) school buses rather than new petroleum diesel fueled buses. Tesoro may satisfy this obligation by contributing the total cost of the school buses. Tesoro plans to satisfy this obligation by contributing \$1,000,000 to the Mount Diablo Unified School District.

A. Purpose

Replacing existing school buses that run on diesel with vehicles that are powered by CNG decreases emissions of NO_x, SO₂, PM, greenhouse gases, and other air pollutants.

B. Project Requirements

1. Consistent with the requirements of this Consent Decree, Tesoro shall contribute funds to replace a minimum of 4 diesel powered school buses serving the Mount Diablo Unified School District in Contra Costa County, California, with a minimum of 4 CNG buses (Replacement Project School Buses). Replacement Project School Buses shall meet all applicable engine standards, certifications, and/or verifications derived from environmental laws.
2. School buses that are being replaced shall be permanently retired from use by the Mount Diablo Unified School District and shall be disposed of in accordance with all applicable environmental laws. A copy of the California Department of Motor Vehicles (DMV) Dismantlers Notice of Acquisition/Report of Vehicle to be Dismantled (REG42), a copy of the DMV registration indicating the bus was dismantled or similar evidence shall be one form of acceptable evidence that the school buses were disposed of in accordance with all applicable environmental laws.

In addition to the information required to be included in periodic reports submitted pursuant to Paragraphs 170 – 171 of this Consent Decree, for the School Bus Replacement Project,

Tesoro shall include the following information (unless such information has already been submitted in a prior report or plan): (a) identification of the school buses replaced during the period covered by the periodic report with bus age, manufacturer, engine model, mileage, and condition; and (b) the per bus expenditure spent during the period covered by the periodic report.

C. Project Completion

1. If EPA concludes based on the Mitigation Project completion report required in Paragraph 171 of the Consent Decree or subsequent information provided by Tesoro that the School Bus Replacement Project has been performed and completed in accordance with the Consent Decree, then EPA will approve completion of the Project for purposes of the Consent Decree.
2. If Tesoro is unable to complete the School Bus Replacement Project in accordance with the Consent Decree and this Appendix due to the Mount Diablo Unified School District's failure to fulfill its obligation, and that failure is not caused by Tesoro and is beyond the control of Tesoro despite Tesoro's best efforts to fulfill its obligations regarding the Project as set out in the Consent Decree and this Appendix, then EPA and Tesoro may agree to cancel the Project and redirect any unspent funds to a mutually-agreed upon Project.

D. Environmental Benefits

Replacement of older diesel fueled school buses with new CNG buses will reduce emissions of NO_x, SO₂, PM, and greenhouse gases and reduce students' in-cabin exposure to diesel pollutants.

E. Schedule

Within 12 months after the Date of Entry of this Consent Decree, Tesoro must contribute funds sufficient to cover the incremental cost difference of purchasing a minimum of 4 Replacement Project School Buses instead of new petroleum diesel buses. Tesoro plans to satisfy this obligation by contributing a total of \$1,000,000 to the Mount Diablo Unified School District to cover the full cost of a minimum of 4 Replacement Project School Buses. Tesoro will submit a Mitigation Project completion report to the United States within 60 days after completion of the School Bus Replacement Project. Tesoro will obtain written confirmation of the purchase of a minimum of 4 new CNG school buses from the Mount Diablo Unified School District and the retirement of 4 petroleum diesel school buses. Tesoro shall include the written confirmation in the Mitigation Project completion report required under Paragraph 171 of the Consent Decree.

II. Infrared Gas-Imaging Cameras

Tesoro shall purchase and employ one infrared gas-imaging camera (such as a FLIR camera or its equivalent) at each of the following refineries: Anacortes, Kenai, Mandan, and Salt Lake City.

A. Purpose

Enhancing workers' safety and supplementing Tesoro's Enhanced LDAR program by employing infrared gas-imaging technology to locate Volatile Organic Compound fugitive emissions that may not be otherwise detected by EPA Method 21 and to take corrective action to address fugitive emissions identified by the infrared gas-imaging camera.

B. Project Requirements

1. Tesoro shall purchase one infrared gas-imaging camera (such as a FLIR camera or its equivalent) for each of the following refineries: Anacortes, Kenai, Mandan, and Salt Lake City.
2. Tesoro will develop a protocol (Infrared Gas-Imaging Protocol) designed to effectively utilize the cameras for locating Volatile Organic Compound fugitive emissions. The Infrared Gas-Imaging Protocol will include the corrective action steps that Tesoro will take to address fugitive emissions identified by the infrared gas-imaging camera. The Infrared Gas-Imaging Protocol will, at a minimum address the following operational criteria:
 - a) Frequency of using the infrared gas-imaging camera, at a minimum bi-monthly;
 - b) Identification of process unit(s) where certified personnel may monitor with an infrared gas-imaging camera;
 - c) Calibration procedures;
 - d) Startup (i.e., warming-up the infrared gas-imaging camera)/shutdown procedures;
 - e) Video recording and retention;
 - f) Operational considerations stemming from weather conditions (e.g., wind speed, temperature, and visibility);
 - g) Maintenance of the instrument;
 - h) Certification of personnel to use the gas-imaging instrument; and
 - i) Minimum number of hours of field use under the direction of certified personnel prior to performing monitoring.
3. Tesoro will train personnel who use the infrared gas-imaging camera at the Anacortes, Kenai, Mandan, and Salt Lake City Refineries on infrared gas-imaging camera fundamentals and operation and implementation of the Infrared Gas-Imaging Protocol.

4. Tesoro will implement the Infrared Gas-Imaging Protocol at the Anacortes, Kenai, Mandan, and Salt Lake City Refineries for a minimum of five years following Date of Entry.

C. Project Completion

1. When EPA concludes, based on the Project completion report or subsequent information provided by Tesoro that the Infrared Gas-Imaging Camera Project has been performed and completed in accordance with the Consent Decree, then EPA will approve completion of the Project for purposes of the Consent Decree.
2. If Tesoro is unable to complete the Infrared Gas-Imaging Camera Project in accordance with the Consent Decree and this Appendix and that failure is beyond the control of Tesoro despite Tesoro's best efforts to fulfill its obligations regarding the Project as set out in the Consent Decree and this Appendix, then EPA and Tesoro may agree to cancel the Project and redirect any unspent funds to a mutually-agreed upon Project.

D. Environmental Benefits

Use of infrared gas-imaging camera will enhance worker safety and supplement Tesoro's existing efforts to detect and reduce fugitive emissions.

E. Schedule

Tesoro must purchase the infrared gas-imaging cameras listed in Paragraph II.B above by Date of Entry. Tesoro will submit a copy of its Infrared Gas-Imaging Protocol to the United States and complete training required by this Appendix at each refinery within 180 Days after Date of Entry. Tesoro will implement the Infrared Gas-Imaging Protocol at the Anacortes, Kenai, Mandan, and Salt Lake City Refineries for a minimum of five years following Date of Entry. Tesoro will submit its Mitigation Project completion report to the United States within 60 Days after completion of the Infrared Gas-Imaging Camera Project.

III. Salt Lake City Ultraformer Furnace (F-1) NO_x Reductions

Tesoro will install Ultra-Low NO_x Burners on the Ultraformer Furnace (F-1) at its Salt Lake City Refinery and, following installation of the Ultra-Low NO_x Burners and performance testing, establish a new NO_x limit for this unit (Ultraformer Furnace (F-1) Project).

A. Purpose

Installation of Ultra-Low NO_x Burners on the Ultraformer Furnace (F-1) decreases NO_x emissions.

B. Project Requirements

1. Tesoro shall install and commence operations of Ultra-Low NO_x Burners on the Ultraformer Furnace (F-1) at Salt Lake City no later than May 1, 2017. The Ultra-Low NO_x Burners in the Ultraformer Furnace (F-1) shall be designed to achieve a NO_x concentration of ≤ 0.040 lb NO_x/MMBtu.
2. Tesoro will conduct a performance test for NO_x emissions on the Ultraformer Furnace (F-1) no later than July 31, 2017, following 40 C.F.R. Part 60, Appendix A, Test Method 7, 7A, 7B, 7C, 7D, or 7E. The test will demonstrate the performance of the Ultra-Low NO_x Burners on the Ultraformer Furnace (F-1) and will be the basis for establishing the appropriate NO_x emissions rate. Tesoro shall conduct the test under representative operating conditions.
3. No later than ninety (90) days after the completion of the performance test, Tesoro shall report to EPA the results of the testing.
4. If the performance test demonstrates that ≤ 0.035 lb NO_x/MMBtu is achievable in practice based on its review of data and information on the actual performance of the Ultraformer Furnace (F-1), the final NO_x emissions limit will be 0.040 lb NO_x/MMBtu (3-hour average).
5. If the performance test demonstrates that ≤ 0.035 lb NO_x/MMBtu is not achievable in practice based on its review of data and information on the actual performance of the Ultraformer Furnace (F-1), the final NO_x emissions limit will be 0.065 lb NO_x/MMBtu (3-hour average).
6. Tesoro shall apply to amend its permit for the Salt Lake City Refinery to include the final NO_x emissions limits (established above) for the Ultraformer Furnace.

C. Project Completion

1. If EPA concludes based on the Mitigation Project completion report required in Paragraph 171 of the Consent Decree or subsequent information provided by Tesoro that the Ultraformer Furnace (F-1) Project has been performed and completed in

accordance with the Consent Decree, then EPA will approve completion of the Project for purposes of the Consent Decree.

2. If Tesoro is unable to complete the Ultraformer Furnace (F-1) Project in accordance with the Consent Decree and this Appendix and that failure is not caused by Tesoro and is beyond the control of Tesoro despite Tesoro's best efforts to fulfill its obligations regarding the Project as set out in the Consent Decree and this Appendix, then EPA and Tesoro may agree to cancel the Project and complete a substitute project with comparable costs and NO_x reduction benefits.

D. Environmental Benefits

Installation of Ultra-Low NO_x Burners on the Ultraformer Furnace (F-1) decreases NO_x emissions.

E. Schedule

Tesoro will submit a Mitigation Project completion report to the United States within 60 days after completion of the Ultraformer Furnace (F-1) Project. Completion of the Ultraformer Furnace (F-1) Project occurs after the Ultra-Low NO_x Burners are installed and operated, the performance test report is submitted to the EPA, and the final NO_x emissions limit is established and included in the permit for the Salt Lake City Refinery.